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ABSTRACT

One method used by Alabama's Snead State Community College (SSCC) to measure student learning is to compare student scores on placement exams, taken before core course work, to results from evaluation exams, taken upon completion of core courses. All incoming freshmen are required to provide scores from American College Testing (ACT) assessment tests or take the ACT Assessment of Student Skills for Entry Transfer (ASSET) placement tests for English and mathematics. Following completion of academic core classes common to all associate degree programs, student performance is then measured by the Collegiate Assessment of Academic Proficiency (CAAP) tests. The decile rankings of SSCC students' entry scores are determined in relation to those of their peers from community colleges nationwide and are then compared with decile rankings on the CAAP test. The data are arranged in a four-quadrant grid according to the following criteria: quadrant one students score low on both entry and exit, quadrant two students score low on entry but high on exit, quadrant three students score high on entry and lower on exit, and quadrant four students score high on both exams. In a sample analysis of SSCC students, a total of 44% of SSCC students showed positive change (quadrant two), 22% maintained their rankings (quadrants one and four), and 34% showed negative change (quadrant three). Finally, these data are analyzed to determine common factors among student quadrants to provide college planners with data to improve student success. (MAB)

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USING STANDARDIZED TEST RESULTS TO ASSESS STUDENT LEARNING

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Valid assessment of student learning must involve multiple measures. As Tom Angelo (1994) points out in his article on classroom assessment, there is a hierarchy of higher education assessment. These measures range from the narrowly focused level of student learning in an individual class meeting all the way to the broad assessment of state community college or university systems. One measure at the intermediate level of program or department review utilizes results from standardized tests to compare students at one institution with their peers from similar institutions.

At Snead State Community College, all entering freshmen are required to either provide scores on the ACT assessment tests or else take placement tests before enrolling in English or mathematics classes. The placement tests used are the ASSET tests from American College Testing (ACT). The placement test scores (or the ACT scores) are used for counseling students into appropriate first level college courses, or when needed, into developmental studies courses in mathematics or English.

Analysis of the scores of incoming freshmen provides data for a longitudinal study of entry levels of freshmen. These scores are also useful for retention studies and studies of the effectiveness of the developmental programs. With data provided from ACT, incoming freshmen at this institution can also be compared to incoming freshmen at similar institutions across the nation.

After students have completed the core of academics that are common to all of the associate degree programs of the institution, they are tested with the ACT CAAP tests. The CAAP tests are designed to measure educational change occurring from exposure to postsecondary education curricula.

American College Testing (ACT) provides a measure of value added with a longitudinal study comparing entry scores to exit scores (The College Improvement Service, 1994). The decile rankings of the students from this institution are determined in relation to their peers from community colleges across the nation. The decile rankings of the CAAP test scores are then compared student by student to the decile rankings of the entry scores on the ACT assessment tests or the ACT ASSET tests.

The reports on these matched sets of data include several types of analyses. For example, Figure 1 shows the ACT/CAAP

Figure 1

Snead State Community College ACT-CAAP Scores
Longitudinal Achievement Results

Student Group = **All Students** — **Writing** Test — Reference Group = **2-Year Colleges**

ACT Deciles	CAAP Deciles 1	2	3	4	5	6	7	8	9	10	Total	
1	3*	5	0	0	0	0	0	0	0	0	8	
2	3	3	3	1	1	1	1	0	0	0	13	2nd Quadrant
3	1	4	2	1	1	2	0	0	1	0	12	
4	1	1	2	4	2	1	0	1	0	0	12	
5	0	2	5	7	3	15	5	2	1	1	41	
6	0	0	1	2	3	3	3	3	7	0	22	
7	0	0	0	0	0	4	0	5	0	3	12	
8	0	0	2	2	2	4	0	8	10	4	32	
9	0	0	0	0	2	5	4	2	3	5	21	4th Quadrant
10	0	0	0	0	0	3	0	1	4	14	22	
Total	8	15	15	17	14	38	13	22	26	27	195	
1st Quadrant Totals	8	15	12	13	7	19	6	3	2	1	2nd Quadrant Totals	
3rd Quadrant Totals	0	0	3	4	7	19	7	19	24	26	4th Quadrant Totals	

1st Quadrant — 3rd Quadrant

Total Students	= 195	Students Above Diagonal	= 85 (44%)
Students On Diagonal	= 43 (22%)	Students Below Diagonal	= 67 (34%)

*** Cell entries are actual n-counts for Snead State Community College.**

** Due to the ACT or CAAP score distributions in your reference group, no scale scores may fall into some deciles; therefore, some rows or columns may contain only 0's.

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comparisons. The decile rankings for each student are plotted on a grid of cells. If student rankings on both tests are in the same decile, then they can be presumed to have maintained the same level in relation to their peers, and their scores will fall on the shaded diagonal line of cells in the center of the grid. If students decile rankings dropped during their course work at this institution, then they will fall below the diagonal. If their rankings improved, they will appear above the diagonal.

Since the grid is divided into four quadrants, an additional interpretation of the data can be discerned (Figure 2). Students in the first quadrant scored low on entry and low on exit. Students in the second quadrant scored low on entry but improved their rankings on exit. Students in the third quadrant scored high on entry and lower on exit. Students in the fourth quadrant scored high on entry and high on exit. Obviously the objective is to increase the number above the diagonal, especially in quadrant two, and to maintain the number in quadrant four.

Figure 3 summarizes the amount of change above, below, and on the diagonal for Snead students and for the reference group. For example, a total of 44 percent of the Snead students showed positive change; 22 percent maintained their rankings, and a total of 34 percent showed negative change. This data also

FIGURE 2

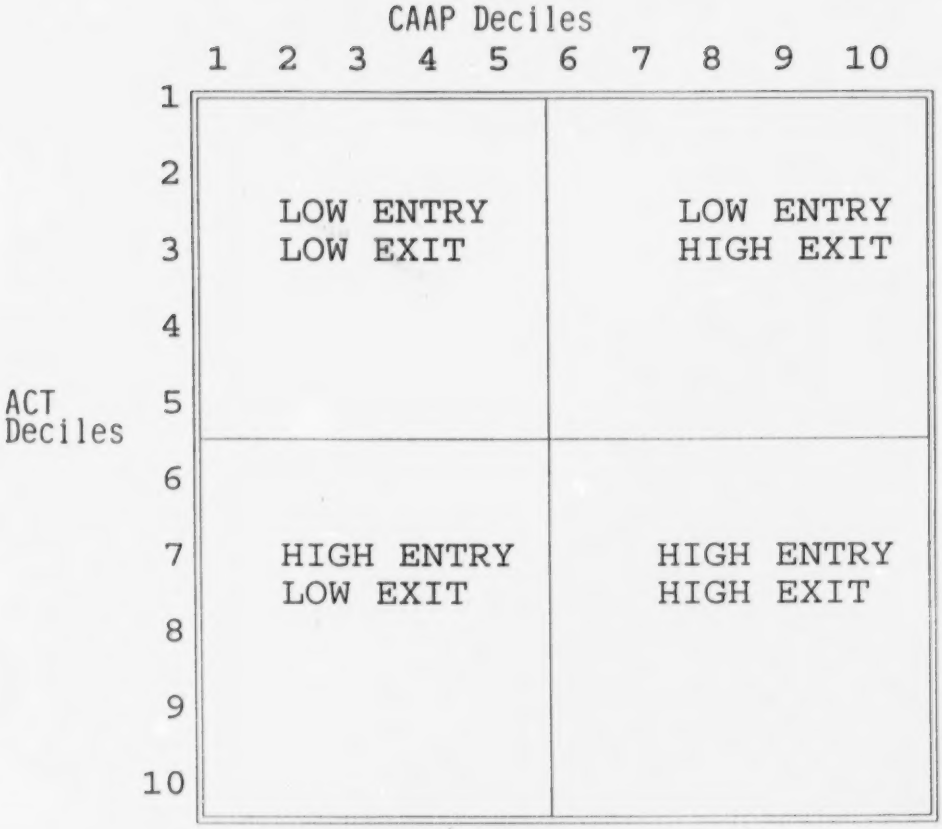
CAAP Deciles
1 2 3 4 5 6 7 8 9 10
ACT Deciles
1 2 3 4 5 6 7 8 9 10
LOW ENTRY
LOW EXIT
LOW ENTRY
HIGH EXIT
HIGH ENTRY
LOW EXIT
HIGH ENTRY
HIGH EXIT

Figure 3

Snead State Community College ACT-CAAP Scores
Longitudinal Achievement Results

Student Group = **All Students** — **Writing** Test — Reference Group = **2-Year Colleges**

Summary of Changes in Decile Standing

For Snead State Community College

0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (1%)	7 (4%)	11 (6%)	18 (9%)	29 (15%)	43 (22%)	49 (25%)	15 (8%)	15 (8%)	3 (2%)	2 (1%)	1 (1%)	0 (0%)	0 (0%)	0 (0%)
-9	-8	-7	-6	-5	-4	-3	-2	-1	On Diagonal	+1	+2	+3	+4	+5	+6	+7	+8	+9
(0%)	(0%)	(0%)	(0%)	(1%)	(1%)	(6%)	(10%)	(16%)	(28%)	(22%)	(8%)	(5%)	(3%)	(0%)	(0%)	(0%)	(0%)	(0%)

For 2-Year Colleges

Changes in Decile Standing by Quadrant

	Below Diagonal		On Diagonal		Above Diagonal			Totals
1st quadrant	26	(47%)	15	(27%)	14	(25%)	55	(28%)
2nd quadrant					31		31	(16%)
3rd quadrant	14						14	(7%)
4th quadrant	27	(28%)	28	(29%)	40	(42%)	95	(49%)
Totals	67	(34%)	43	(22%)	85	(44%)	195	

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provides a measure of the amount of change in the group of students from Snead as compared to the amount of change in the reference group.

The next step in analyzing these reports is to try to determine if there are factors in common among the students who improved their rankings and if there is some commonality among those who showed negative change. Identifying the specific students on the chart provides the means for comparing test scores to other information about the students, such as major program of study, numbers of hours completed, part-time or full-time attendance, age, gender, and other demographic data. This provides the kinds of information that college planners need as a basis for changes that the college can make to improve student success.

Entry and exit testing in mathematics and English is one measure of the effectiveness of the common core of academic courses. These analyses of scores are reported to the persons responsible for academic programs who use this information along with other assessment measures to plan for improvements in student learning.

References

Angelo, T. A. "Classroom Assessment: Involving Faculty and Students where It Matters Most." *Assessment Update*, 1994, Volume 6, Number 4, 1-2+.

"The College Improvement Service Basic Report ACT-CAAP Longitudinal Achievement Results for Snead State Community College, Spring 1994." American College Testing. Iowa City, Iowa. 1994.